

the anaphylactic shock.—Paul **Sabatier** and M. **Murat**: The preparation by catalysis of decahydroquinoline and of decahydroquinoline. Ten atoms of hydrogen can be added to the quinoline and quinaldine molecules by nickel catalysis, provided that the temperature of the reaction is suitably chosen and that a very active nickel is employed. The decahydroquinoline is new, and its properties and those of some of its derivatives are given.—Georges **Charpy**: The fragility produced in iron and steel by deformation at different temperatures.—Report on a memoir by Louis Roy, entitled "On the Movement of Viscous Media and Quasi-waves."—M. H. **Parenty** was elected a correspondant for the section of mechanics in succession to M. Duhem, elected non-resident member.—The Perpetual Secretary announced the death of M. Harry Rosenbusch, correspondant for the section of mineralogy.—M. **Gambier**: Algebraic curves of constant torsion, genus not zero.—A. **Buhl**: The extensions of Stokes's formula, the Monge-Ampère equations, and analytical functions of two variables.—E. **Cartan**: The integration of certain systems of differential equations.—R. **Boulyguine**: The representation of a prime number by a series of squares.—G. **Pólya**: A question concerning integral functions.—M. de **Broglie**: The production of Röntgen-ray spectra by simple passage of the incident rays through thin sheets.—R. **Fortrat**: The simplification and regularisation of the spectral bands by the magnetic field. A discussion of a recent paper on the same subject by MM. Deslandres and Azambuja.—E. **Tassilly**: A study of the process of diazotising by the spectroscopic method. The amount of diazo-compound formed was followed by measuring the absorption and the results for aniline, orthotoluidine, and paratoluidine given graphically.—Maurice **Drapier**: The influence of shaking on the solution of copper in nitric acid. Solutions of nitric acid of strengths readily attacking copper (30 to 48 per cent.) when at rest, lose their power of dissolving the metal when rapidly rotated or shaken. As an example, a solution of 36 per cent. nitric acid which dissolved 0.397 gram of copper from a given piece of metal at rest in fifteen minutes, dissolved only 0.004 gram in the same time when the metal was rotated at 386 turns per minute.—L. **Crussard**: Limits of inflammability and the specific retardation of inflammation.—Gustave **Chauveaud**: The constitution and morphological evolution of the bodies in the vascular plants.—M. **Blaringhem**: The production of hybrids between *Triticum monococcum* and different cultivated wheats.—H. **Aguilhon** and Mlle. Th. **Robert**: The action of colloidal uranium on the pyocyanic bacillus. In the presence of minute amounts of colloidal uranium the amount of pyocyanine formed by the bacillus is greatly increased.—Louis **Roule**: The larval phases and metamorphosis of fishes belonging to the family of the Nemichthydes.—Ch. **Gravier**: A new type of parasitic Crustacean from the South American Antarctic.—M. **Jay**: Remarks on the estimation of boric acid in food substances.—H. **Guillemard**: Observations on the physiological action of climate at high altitudes. Studies on the variations in the nitrogen compounds of the blood serum at high altitudes.—J. L. **Dantan**: The tendency towards the substitution of the Portuguese oyster (*Gryphea angulata*) for the native oyster (*Ostrea edulis*).—Maurice **Nicloux**: The laws of the absorption of carbon monoxide by the blood. It has been shown in the previous paper that the hæmoglobin of the blood corpuscles put in contact with mixtures of carbon monoxide and oxygen combines with the two gases in proportions defined by their respective partial pressures and governed by the law of mass action. These experiments have now been extended to living animals (dogs), and the same laws are found to be applicable. It is shown that

with a given mixture of carbon monoxide and air when breathed by an animal, the carbon monoxide is fixed by the blood up to a certain limit which cannot be passed. Oxygen displaces the carbon monoxide from the blood, and pure oxygen constitutes the best treatment for carbon monoxide poisoning.—André **Mayer** and Georges **Schaeffer**: The proportion of lipoids in the tissues and the physiological activity of the cells. Thermal regulation. When the body is subjected to extremes of heat or cold variations are produced in the amounts of lipid phosphorus in the serum.—P. A. **Dangeard**: The penetrating power of violet and ultra-violet rays through leaves.—Em. **Bourquelot** and M. **Bridel**: Ferment equilibria. Distribution and displacements in an alcoholic medium containing glucose and two glucoside-forming ferments.—Emile **Haug**: The Triassic zone of the Huveaune.—Léon **Bertrand** and Antonin **Lanquine**: The prolongation of the Bessilons sheet in the south-west of the Maritime Alps, up to the Var valley.

BOOKS RECEIVED.

Transactions of the Connecticut Academy of Arts and Sciences. Vol. xviii. A Monograph of the Terrestrial Palæozoic Arachnida of North America. By Prof. A. Petrunkevitch. Pp. 137+plates. (New Haven, Conn.: Yale University Press.)

Notes on the Blue-Green Algæ. With a Key to the Species of Oscillatoria and Phormidium. By H. Wager. Pp. 48. (London: A. Brown and Sons, Ltd.) 2s. 6d. net.

Meteorology of Australia. Commonwealth Bureau of Meteorology. The Climate and Weather of Australia. By H. A. Hunt, G. Taylor, and E. T. Quayle. Pp. 93+plates. (Melbourne: A. J. Mullett.) 5s.

The Philosophy of Bergson. By Hon. B. Russell, with a Reply by W. W. Carr, and a Rejoinder by Mr. Russell. Pp. 36. (Cambridge: Bowes and Bowes; London: Macmillan and Co., Ltd.) 1s. net.

Gipsy Coppersmiths in Liverpool and Birkenhead. By Andreas (Mui Shuko.) Pp. iv+66. (Liverpool: H. Young and Sons.) 1s. net.

Ministry of Finance, Egypt. Survey Department. Meteorological Report for the year 1911. Part i., Helwan Observatory. Pp. xvi+31. (Cairo: Government Press.) P.T. 15.

Tychonis Brahe Dani, Opera Omnia. Editio J. L. E. Dreyer. Tomus i. Pp. lix+320. (Copenhagen: Gyldendalske Boghandel.)

The Geographic Society of Chicago. Bulletin No. 5. Animal Communities in Temperate America as Illustrated in the Chicago Region. By Dr. V. E. Shelford. Pp. xiii+362. (Chicago, Ill.: University of Chicago Press; London: Cambridge University Press.) 12s. net.

A Text-book of Medical Entomology. By W. S. Patton and Dr. F. W. Cragg. Pp. xxxiv+768+lxxxix plates. (London, Madras, and Calcutta: Christian Literature Society for India.) 21s.

Stanford's Geological Atlas of Great Britain and Ireland. By H. B. Woodward. Third edition. Pp. xii+214+50 plates. (London: E. Stanford, Ltd.) 12s. 6d. net.

Aus Chiles Vergangenheit Plaudereien. By A. Wilckens. Pp. 108. (Valparaíso: C. F. Niemeyer.)

Year-Book of the Royal Society of London, 1914. Pp. 254. (London: Harrison and Sons.) 5s.

The Institute of Chemistry of Great Britain and Ireland. Lectures on the Research Chemist in the Works, with Special Reference to the Textile Industries. By W. P. Dreaper. Pp. 70. (London: Institute of Chemistry.)

Dental Diseases in Relation to Public Health. By

Dr. J. Sim Wallace. Pp. viii+90. (London: *The Dental Record*.) 3s. net.

Tabellen zur Berechnung der "theoretischen" Mollrefraktionen organischer Verbindungen. By K. v. Auwers and A. Boennecke. Pp. 27. (Berlin: J. Springer.) 1.20 marks.

Die Entstehung des Lebendigen. By Prof. E. Schwalbe. Pp. 27. (Jena: G. Fischer.) 80 pfennigs. Dynamics. By Prof. H. Lamb. Pp. xi+344. (Cambridge University Press.) 10s. 6d. net.

Kaiserliche Marine, Deutsche Seewarte. Deutsches Meteorologisches Jahrbuch für 1912. Beobachtungssystem der Deutschen Seewarte. Ergebnisse der Meteorologischen Beobachtungen. Jahrgang xxxv. Pp. vii+176. (Hamburg.)

Die Tiere der Vorwelt. By Prof. O. Abel. Pp. iv+88. (Leipzig and Berlin: B. G. Teubner.) 1.25 marks.

Die neueren Wärmekraftmaschinen. I., Einführung in die Theorie und den Bau der Gasmotoren. By Prof. R. Vater. Pp. iv+120. (Leipzig and Berlin: B. G. Teubner.) 1.25 marks.

Leitfaden für das embryologische Praktikum und Grundriss der Entwicklungslehre des Menschen und der Wirbeltiere. By Prof. A. Oepel. Pp. vii+313. (Jena: G. Fischer.) 10 marks.

DIARY OF SOCIETIES.

THURSDAY, FEBRUARY 12

ROYAL SOCIETY, at 4.30.—Chemical Action that is Stimulated by Alternating Currents: S. G. Brown.—The Effect of the Gangetic Alluvium on the Plumb-line in Northern India: R. D. Oldham.—Note on the Origin of Black Body Radiation: G. W. Walker.—The Transmission of Electric Waves along the Earth's Surface: Prof. H. M. Macdonald.—Transparency or Translucence of the Surface Film Produced in Polishing Metals: G. T. Beilby.—A Thermomagnetic Study of the Eutectoid Transition Point of Carbon Steels: Dr S. W. J. Smith and J. Guild.—Note on Osmotic Pressure: W. R. Bousfield.

ROYAL INSTITUTION, at 3.—Types and Causes of Earth Crust Folds: Sir Thomas H. Holland, K.C.I.E.

CONCRETE INSTITUTE, at 7.30.—Factory Construction: P. M. Fraser.

ROYAL SOCIETY OF ARTS, at 4.30.—Khorasan: the Eastern Provinces of Persia: Major Percy M. Sykes.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Some Railway Conditions governing Electrification: R. T. Smith.

FRIDAY, FEBRUARY 13

ROYAL INSTITUTION, at 9.—Production of Neon and Helium by Electric Discharge: Prof. J. Norman Collie.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Anniversary Meeting.

PHYSICAL SOCIETY, at 8.—The Moving Coil Ballistic Galvanometer: R. L. Jones.—Vibration Galvanometers of Low Effective Resistance: A. Campbell.—Vacuum-tight Lead-seals for Sealing-in-wires in Vitreous Silica and other Glasses: Dr. H. J. S. Sand.

MALACOLOGICAL SOCIETY, at 8.—Annual Meeting.—Presidential Address: Some Points and Problems in Geographical Distribution: Rev. A. H. Cooke.

ALCHEMICAL SOCIETY, at 8.15.—Some Notes on the Doctrine of the First Matter, with Special Reference to the Works of Thomas Vaughan: Sijil Abelul-Alli.

SATURDAY, FEBRUARY 14

ROYAL INSTITUTION, at 3.—The Electric Emissivity of Matter. I.: The Metals: Dr. J. A. Harker.

MONDAY, FEBRUARY 16

ROYAL SOCIETY OF ARTS, at 8.—Artistic Lithography: J. Pennell.

TUESDAY, FEBRUARY 17

ROYAL INSTITUTION, at 3.—Animals and Plants under Domestication: Prof. W. Bateson.

ZOOLOGICAL SOCIETY, at 8.30.—Lantern Demonstration of the Helminths collected by Scott's Antarctic Expedition: Dr. R. T. Leiper and Surgeon Atkinson, R.N.—Observations made to ascertain whether any Relation subsists between the Seasonal Assumption of the "Eclipse" Plumage in the Mallard (*Anas boschas*) and the Condition of the Testicle: C. G. Seligmann and S. G. Shattock.—Some Phases in the Female Reproductive System of the Mole (*Talpa europaea*): F. Wood Jones.—Contributions to a Study of the Dragon-fly Fauna of Borneo. II.: The Gomphinae and Chlorogomphinae: F. F. Laidlaw.—Note on an Imperfectly-developed Specimen of *Echinus esculentus*: H. C. Chadwick.—The Possible Connection between Spindle-length and Cell-volume: C. F. U. Meek.

ROYAL GEOGRAPHICAL SOCIETY, at 8.45.—Some Aspects of Travel: Rudyard Kipling.

ROYAL ANTHROPOLOGICAL INSTITUTE (Joint Meeting with the Prehistoric Society of East Anglia), at 4.—Papers by Members of the Prehistoric Society of East Anglia.—At 8.15.—Flint Finds in Connection with Sand: R. A. Smith.—The Experimental Investigation of Flint Fracture and Problems of Early Man: S. Hazzledine Warren.

ILLUMINATING ENGINEERING SOCIETY, at 8.—Discussion on the Lighting of Picture Galleries and Art Studios: Opened by Prof. S. P. Thompson.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Further Discussion: The New Harbour Works and Dockyard at Gibraltar: A. Scott.

ROYAL STATISTICAL SOCIETY, at 5.—The Census of the Empire, 1911: Its Scope and some of its Results: Sir J. Athelstane Baines.

WEDNESDAY, FEBRUARY 18

AERONAUTICAL SOCIETY, at 8.30.—Aerial Navigation at Sea.

ROYAL SOCIETY OF ARTS, at 8.—The Preservation of Wood: A. J. Wallis-Taylor.

ROYAL METEOROLOGICAL SOCIETY, at 7.30.—The Interpretation of the Results of Soundings with Pilot Balloons: Dr. W. N. Shaw.—Pilot Balloon Ascents at the Central Flying School, Upavon, during the Year 1913: G. M. B. Dobson.

THURSDAY, FEBRUARY 19

ROYAL SOCIETY, at 4.30.—*Probable Papers*: The Brain of Primitive Man, with Special Reference to the Cranial Cast and Skull of Eoanthropus (The Piltown Man): Prof. G. Elliot Smith.—Oxidases: Prof. A. J. Ewart.—A New Malaria Parasite of Man: Dr. J. W. W. Stephens.—Investigations Dealing with the Phenomena of "Clot" Formations. II: The Formation of a Gel from Cholate Solutions having many Properties Analogous to those of Cell Membranes: S. B. Schryver.—The Influence of the Position of the Cut upon Regeneration in *Gunda ulvae*: D. Jordan Lloyd.

INSTITUTION OF MINING AND METALLURGY, at 8.

FRIDAY, FEBRUARY 20

ROYAL INSTITUTION, at 9.—Busts and Portraits of Shakespeare and of Burns: An Anthropological Study: Prof. Arthur Keith.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Annual General Meeting.—Some Modern Methods of Welding: T. T. Heaton.

INSTITUTION OF CIVIL ENGINEERS at 8.—The Use of Reinforced Concrete in Connection with Dock and Other Maritime Work: C. S. Meik.

SATURDAY, FEBRUARY 21

ROYAL INSTITUTION, at 3.—The Electric Emissivity of Matter: Dr. J. A. Harker.

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